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Monroe 231
Office Hours: Wednesday, 1-2
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Econ 422
Fall 2023
9:30-10:45 TuTh
Monroe 130

International Finance and Macroeconomics (Econ 422)

OUTLINE OF COURSE

1. Accounting

a. Balance of payments accounting

The balance of payments is a record of all the transactions between the residents of one country and the rest of the world (financial and trade flows). We will discuss what types of transactions are recorded and how they are recorded. We also discuss some key balance of payments accounting identities that link trade flows and financial flows and which will be critical later on in the course.

b. National income accounting

We show that national income accounting implies that the current account is equal to national saving minus investment.

c. National Intertemporal Budget Constraint

We show that a country's net external debt is equal to the present discounted value of future trade surpluses plus future excess returns on external assets relative to liabilities. In other words, if you have a debt you can pay it back by either running future trade surpluses (exporting more than you import) or earning more on external assets than you pay on external liabilities.

2. United States

a. United States Balance of Payments

We discuss data for the United States related to balance of payments and national income accounting. We discuss the current account (from a trade, capital flows and

saving minus investment perspective). We also discuss the U.S. net foreign asset position and its relationship to the current account. Finally, we discuss reasons for sustained U.S. current account deficits and we consider whether current account deficits are good or bad.

b. Special Role of the US in International Finance

We discuss the dominant role of the dollar in both international finance and international trade and the implications this has for the impact of US monetary policy on the rest of the world. We also discuss the role that the US plays as a global insurer of the rest of the world, receiving large net transfers from the rest of the world in good times (insurance premium), while making large net transfers to the rest of the world in bad times (insurance payout). Finally, we discuss the so-called "New Triffin Dilemma."

3. Global Financial Cycle

We discuss a strong global co-movement in risky asset prices and capital flows, driven by fluctuations in perceived risk and risk-aversion. We discuss what drives fluctuations in global risk-aversion. We show that fluctuations in US monetary policy, due to its special role in the center of the global financial system, can drive global risk-aversion and therefore drive global risky asset prices, capital flows and risk premia. We also discuss how the global financial cycle impacts emerging markets.

4. Exchange Rates

a. Exchange rate determination: role of trade flows and capital flows

We start with a very simple demand and supply analysis of the foreign exchange market. We discuss how supply and demand for foreign exchange are driven by trade and capital flows. Later on we will explicitly model these trade and capital flows in order to understand how exchange rates are determined in a general equilibrium framework.

b. Foreign exchange market at an institutional level

We discuss how the foreign exchange market operates at an institutional level: who are the traders, where and when does trade take place, how does trade take place, why is the trading volume so high, what are the different types of instruments (spot, forward, futures, option, swap contracts)

c. Exchange rate, currency invoicing and trade

We discuss evidence related to the three types of currency invoicing in international trade: producer currency pricing (PCP), local currency pricing (LCP) and dominant currency pricing (DCP). We then discuss how the type of invoicing impacts the relationship between exchange rate changes and import and export price changes and how this affects exports and imports. We also discuss how exchange rate changes affect final consumer prices.

d. Nominal versus real exchange rate

The real exchange rate is the ratio of the foreign to domestic consumer price index. It is a measure of the relative cost of living. We discuss what determines the real exchange rate and why there is a very close link between the nominal and the real exchange rate.

5. How integrated are international financial markets?

a. Evidence from interest rate parity

We discuss covered interest rate parity (interest rate arbitrage with exchange rate risk hedged through the forward market). We discuss under what conditions covered interest rate parity does not hold. We provide evidence of deviations from covered interest parity in industrialized countries due to capital controls (in the 1960s, 70s and 80s). We also discuss evidence of large deviations from covered interest rate parity since the 2008 global financial crisis. These deviations are due to post-crisis regulations that have limited the ability of banks to engage in covered interest rate arbitrage.

b. Evidence from international portfolio diversification

We discuss evidence of portfolio home bias, especially in the stock market, and discuss reasons for this home bias.

c. Evidence from saving-investment relationship

We discuss evidence on whether high domestic saving rates also imply high domestic investment rates, which suggests that most of the saving is channeled through financial markets to finance domestic rather than foreign capital accumulation. This is consistent with the portfolio home bias.

6. Open economy model of exchange rate, output, capital flows, interest rate

a. Fixed and floating exchange rate regimes without capital mobility

The models used in the course are general equilibrium models. This is critical since partial equilibrium reasoning, while it often sounds reasonable, is generally seriously flawed. In this section we start with a model in which there are no international capital flows. We first consider a simple setup in which there are only two markets: the goods market and the foreign exchange market. We then add the money market. We consider the operation of both fixed and floating exchange rate regimes in this environment without capital mobility. We discuss the impact of monetary and fiscal policy and the transmission of shocks across countries.

b. Fixed and floating exchange rate regimes with capital mobility (Mundell-Fleming model)

We next introduce capital flows to the model, which are an important (actually the most important) component of demand and supply for foreign exchange. We again discuss the impact of monetary and fiscal policy under fixed and floating exchange rate systems. One of the key results is that a country will no longer have control over its monetary policy if it adopts a fixed exchange rate system and there is a high degree of capital mobility. That is why fixed exchange rate systems usually do not last long. They often end in a currency crisis. In this context we will discuss the collapse of the postwar monetary system (Bretton Woods) in 1973.

c. Transmission of shocks across countries

We discuss how shocks are transmitted across countries under perfect capital mobility. We show that under both fixed and floating exchange rate regimes the transmission will be very different than under no capital mobility.

d. Exchange rate determination in a dynamic environment

The models discussed so far are static models where everything happens immediately. In reality the exchange rate is determined within a dynamic environment and will depend like any asset price on expectations about the future, e.g. the future growth rate of the economy or future monetary policy. In this section of the course we will discuss such dynamic models, both with flexible and sticky prices.

e. Exchange rate puzzles: Meese-Rogoff puzzle and forward discount puzzle

In this section we discuss two exchange rate puzzles: the Meese-Rogoff puzzle and the forward discount puzzle. The Meese-Rogoff puzzle is essentially an exchange rate disconnect puzzle. We show that the exchange rate is not

closely connected to observed macro fundamentals (in contrast to our models, where the exchange rate is entirely determined by macro fundamentals). We will discuss various reasons for this. The second puzzle, the forward discount puzzle, says that when the interest rate on a currency rises relative to other currencies, it tends to subsequently appreciate. This implies a higher return, both due to the higher interest rate and the appreciation of the currency. The question is why investors do not arbitrage the resulting expected return differentials. We will discuss various explanations for this puzzle.

7. Financial Crises

a. Emerging market crises

Since 1995 many emerging markets have been hit by currency crises (e.g. Mexico, Brazil, Argentina, Russia, Korea, Thailand, Indonesia, Philippines, Turkey). These crises take the form of sudden stops, where there is a sudden stop of net capital inflows into a country. We will discuss what happens during these sudden stops and why they occur. We also discuss some policy implications.

b. European Debt Crisis and the Euro

There is a single currency in most of Europe (the Euro) since the start of the European Monetary System (1979-1999) in January, 1999. We will discuss the pros and cons of monetary unions. We address whether the choice of Europe to form a monetary union was a wise one by drawing comparisons to the United States. We finish with a discussion of the European Debt crises that started in the Spring of 2010.

c. 2007-2008 global financial crisis

We discuss the 2007-2008 global financial crisis. Large mortgage market losses lead to a sharp drop of the net worth of highly leveraged financial institutions, particularly in the shadow banking system (broker-dealers, hedge funds). This significantly reduced their ability to borrow (in the repos market and commercial paper market), leading to a large sell-off of assets, even good assets. We discuss how the financial crisis has led to a recession and why the recession was global in nature, with a similar decline in business cycles and asset prices all across the globe.

LECTURE MATERIALS

There is no textbook (see below). All lecture materials are posted on Canvas. At the start of the course, I post all materials for the entire course. But as we go along, I will make (small) revisions to some sections prior to the corresponding lectures.

I will also post old exams. But I introduced new material to the course during Fall 2022 that you will not see on earlier exams (this applies to sections 2b, 3, 4c and 5a).

I plan to teach with my iPad. About a third of the time I will use Powerpoint files, while the remainder of the time I will write notes on the iPad. I will post those notes as well on Canvas (not after every lecture, but about once a week). But of course not everything I say I write down, so you should attend the classes.

OVERALL COURSE GRADE

Problem sets count for 30% of the final grade, the midterm for 30% and the final exam for 40%. While the scale that I use to convert from number to letter grades can vary a bit from semester to semester (depending also on the grading of a particular grader), as an indication, I used the following scale in recent semesters: A+ >97, A: 91-97, A-: 86-91, B+: 81-86, B: 76-81, B-: 71-76; C+: 66-71, C: 61-66; C-:56-61; D+: 51-56.

PROBLEM SETS

- There will be four problem sets, evenly spaced through the semester. Problem sets are usually due one week after they are assigned. The deadline for submitting the problem set can be found under "Assignments" in Canvas.
- I will only count the three best problem set grades. As a result, there is no need to give reasons to me for why you did not do a problem set or turned it in late. That one simply won't count.
- You can collaborate with others for problem sets. If you do that, everyone still needs to turn in their own answers.
- Make sure your answers are legible (either by typing or clear handwriting).
- Make a pdf file of your problem set before uploading it to Assignments in Canvas.
- The name of the grader is Jiong Wu (jw3tz@virginia.edu). The grader will have office hours after problem sets or the midterm are graded. You should first talk to the grader about any grading questions. If you still disagree, email me or talk to me during office hours.
- I will not make answers to problem sets available afterwards. This is because I will re-use questions on problem sets. It is very costly to produce a new set of questions each semester. However, I am happy to discuss the answers during office hours if you are not sure why you got points off.

EXAMS

- There will be one midterm exam, in class, on October 10. The midterm exam covers all materials up to the date of the exam. There will be no make-ups.
- The final exam will be Thursday, December 7, 2pm-5pm. The final exam covers the entire course. There will again be no make-up exams.
- If you miss an exam (the reason does not matter), the grading will be based on the remaining coursework, with a penalty. If you miss the midterm, the final grade is (on the scale of 0-100): $(0.4 \times \text{average problem sets}) + (0.6 \times \text{final exam}) - 5$. If you miss the final exam the final grade is $(0.5 \times \text{average problem sets}) + (0.5 \times \text{midterm exam}) - 10$. If you miss both the midterm and the final you will get an F irrespective of the problem set grades. If you did an exam, it counts, even if the grading formula would be more attractive if you took the penalty. Although I cannot enforce this, you should always take exams if you are able to. So please avoid strategically missing the final exam if you think this will help with your grade (even after the penalty).

Office Hours

- There is a regular in person office hour every week on Wednesday, 1-2. In addition I will schedule ad hoc office hours when a problem set is due and before exams. There are usually more students during these ad hoc office hours. I will therefore schedule those in a larger room nearby my office.
- You can also email me with questions. But for that you need to be very precise about what your question is. Note that I will not answer questions on the night before an exam.

No Textbook

I will post all lecture notes on the Canvas site. There is no textbook. For those of you who would like to take a look at a textbook for background, two good books (neither of which I will follow) are (1) Melitz, Marc J., Maurice Obstfeld and Paul R. Krugman, "International Economics" Addison Wesley, 12th edition, 2022 and (2) Feenstra, Robert C. and Alan Taylor, "International Economics," Worth Publishers, fifth edition, 2021.

Wait List

I will let in all students who want to get into the class. The wait list will take care of most of this automatically. Please email me between August 28 and August 30 if you are still on the wait list and like to get in. Assuming that there is space in the classroom (which will be no problem), I will give you permission to enroll, following the position in the wait list. Note that after I give you permission to enroll, you still have to enroll in the class on your own.